

LISTING OF THE CLAIMS

We Claim:

1. (Currently amended) A one-piece expandable flat bearing structure comprising at least partially elastically deformable struts which are separated from each other by openings in the bearing structure, the struts including:

_____ spring struts having an anchor region on a first end and extending to a resiliently deflectable second end, the spring struts being elastically resilient with respect to the anchor regions,

hinge struts adjoining said spring struts at the resiliently deflectable second ends of the spring struts, ~~wherein~~ forming a hinge axis ~~is formed~~ at the juncture of a spring strut and a hinge strut, the hinge axis extending transversely with respect to the bearing structure at the juncture of the spring strut and the hinge strut, and each hinge strut having a central axis,

wherein the bearing structure can assume at least one compressed condition, at least one transitional condition, and at least one expanded condition and wherein the bearing structure has at least one expansion direction, and

_____ wherein a reference axis extends within the bearing structure in approximately parallel relationship with a longitudinal axis of the ~~stent~~ bearing structure and transversely with respect to the expansion direction and transversely with respect to the hinge axis,

wherein the spring struts and the hinge struts are of such a configuration and arrangement that the bearing structure is capable of going from a compressed condition to a transitional condition, to an expanded condition, and

wherein in the compressed state, the spring strut and hinge strut bear closely against each other and are separated by cuts, and the central axis of the hinge strut is transverse to the reference axis, and

wherein in the transitional condition, the hinge strut is pivoted at the hinge axis in an expansion direction of the bearing structure such that the central axis of the hinge strut is approximately parallel to the reference axis and the spring struts rotate in a first direction such that the spring struts are initially resiliently deflected transversely to the expansion direction of the bearing structure, and

wherein in the expanded condition, the hinge strut additionally pivots at the hinge axis in the expansion direction of the bearing structure beyond the reference axis such that the central axis of the hinge strut is transverse to the reference axis and the spring struts rotate in a second direction opposite to the first direction, thereby providing that both the compressed condition of the bearing structure and also the expanded condition of the bearing structure are stabilized by a spring action emanating from the spring struts.

2. (Previously presented) A bearing structure as set forth in claim 1, wherein a respective spring strut adjoins both longitudinal ends of a respective hinge strut and said two spring struts are so arranged relative to each other that they exert a moment in the same direction on the hinge strut about the hinge axis.

3. (Previously presented) A bearing structure as set forth in claim 2, wherein the two spring struts respectively adjoining a hinge strut are shaped and arranged in point-symmetrical relationship with each other.
4. (Previously presented) A bearing structure as set forth in claim 1, wherein the bearing structure forms a peripheral wall of a stent.
5. (Previously presented) A bearing structure as set forth in claim 4, wherein the expansion direction extends in the peripheral direction of the stent while the hinge axis is oriented approximately radially.
6. (Previously presented) A bearing structure as set forth in claim 1, comprising plastic material.
7. (Previously presented) A bearing structure as set forth in claim 1, comprising a magnesium alloy.
8. (Previously presented) A bearing structure as set forth in claim 1, comprising a bioresorbable material.
9. (Cancelled)
10. (Previously presented) A bearing structure as set forth in claim 1, wherein the cuts are of such a configuration as to provide hinge struts which are S-shaped or W-shaped in the compressed condition.

11. (Currently amended) A bearing structure as set forth in claim 10, wherein the cuts are expanded in ~~have~~ end regions of the cuts ~~which are of an expanded configuration~~ to reduce a notch effect.

12. (Previously presented) A bearing structure as set forth in claim 1, wherein in the proximity of the anchor regions, the spring struts are of a larger cross-sectional area than in the region of their resiliently deflectable ends.

13. (Previously presented) A bearing structure as set forth in claim 12, wherein the spring struts steadily taper from the anchor regions towards the resiliently deflectable ends.

14. (Previously presented) A bearing structure as set forth in claim 1, wherein the hinge struts are of a substantially uniform cross-section transversely with respect to their central axis.

15. (Previously presented) A bearing structure as set forth in claim 1, wherein a transitional region of a cross-section which is reduced in relation to the hinge strut is provided between a respective resiliently deflectable end of a spring strut and the hinge strut adjoining the resiliently deflectable end.

16. (Currently amended) A bearing structure as set forth in claim 1, wherein the cuts are expanded in ~~have~~ end regions of the cuts ~~which are of an expanded configuration~~ to reduce ~~the~~ a notch effect.